CS 6301.004: Special Topics in Computer Science - Practical Aspects of Data Science

## Project 4

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APP190000

The returns of the investment are calculated according to both strategy 1 and strategy 2. The final data obtained (shares, total investment and profits) are attached in the submitted folder in the Tables subfolder.

Year	Strategy 1 return(profit)	Strategy 2 return(profit)
1993	279.9759	0
1994	360.1482	-657.133
1995	10221.33	0
1996	21256.11	10642.95
1997	44945.39	12331.47
1998	75954.62	10529.59
1999	106860.2	10580.71
2000	87718.81	-12923.6
2001	66149.32	-15287.9
2002	28124.57	-7505.98
2003	71001.84	12368.9
2004	93301.84	9862.28
2005	105107.3	11913.3
2006	147037.7	5061.523
2007	163098.9	22683.55
2008	35220.36	-39879.3
2009	96791.64	46918.32
2010	143144.9	-34819.3
2011	149810.2	37836.9
2012	210230	32274.37
2013	356338.2	36022.26
2014	438689.1	39512.17
2015	447397.6	-50873.3
2016	534754	18531.9
2017	713858.8	0
2018	666776.3	121913.7
2019	972793.5	12998.4
2020	807409.7	1709.436

Year	Strategy 1(Amount at the end of each year)	Strategy 2(Amount at the end of each year)
1993	9279.976	9251.622
1994	21360.15	20342.87
1995	43221.33	40903.863
1996	66256.11	59237.727
1997	101945.4	80810.956
1998	144954.6	114367.912
1999	187860.2	133631.472
2000	180718.8	123503.94
2001	171149.3	120888.289
2002	145124.6	124710.02
2003	200001.8	158216.268
2004	234301.8	187961.814
2005	258107.3	194483.549
2006	312037.7	237732.003
2007	340098.9	246599.58
2008	224220.4	218720.254
2009	297791.6	282922.599
2010	356144.9	282050.787
2011	374810.2	306586.158
2012	447230	348930.585
2013	605338.2	438497.898
2014	699689.1	459564.230
2015	720397.6	409591.71
2016	819754	449025.412
2017	1010859	559662.071
2018	975776.3	586037.29
2019	1293793	665778.738
2020	1132410	616745.1

Plot using Strategy 1

Monthly:
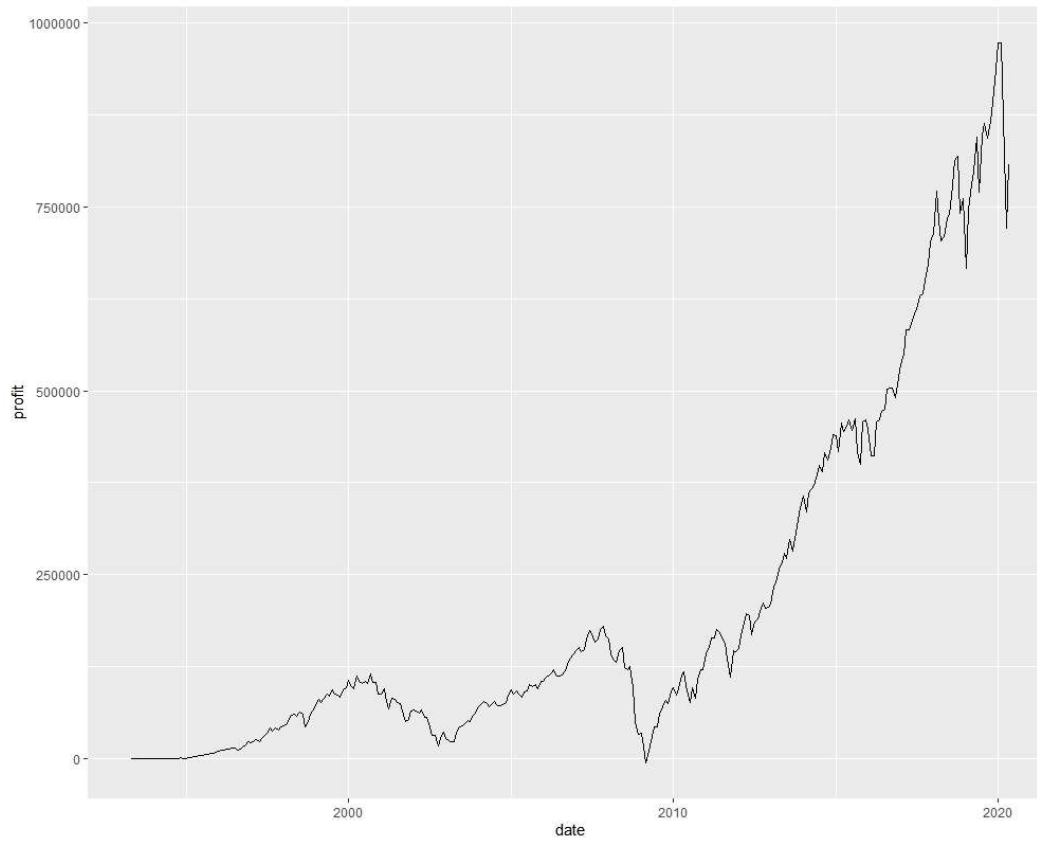
Plot using Strategy 1

Yearly:
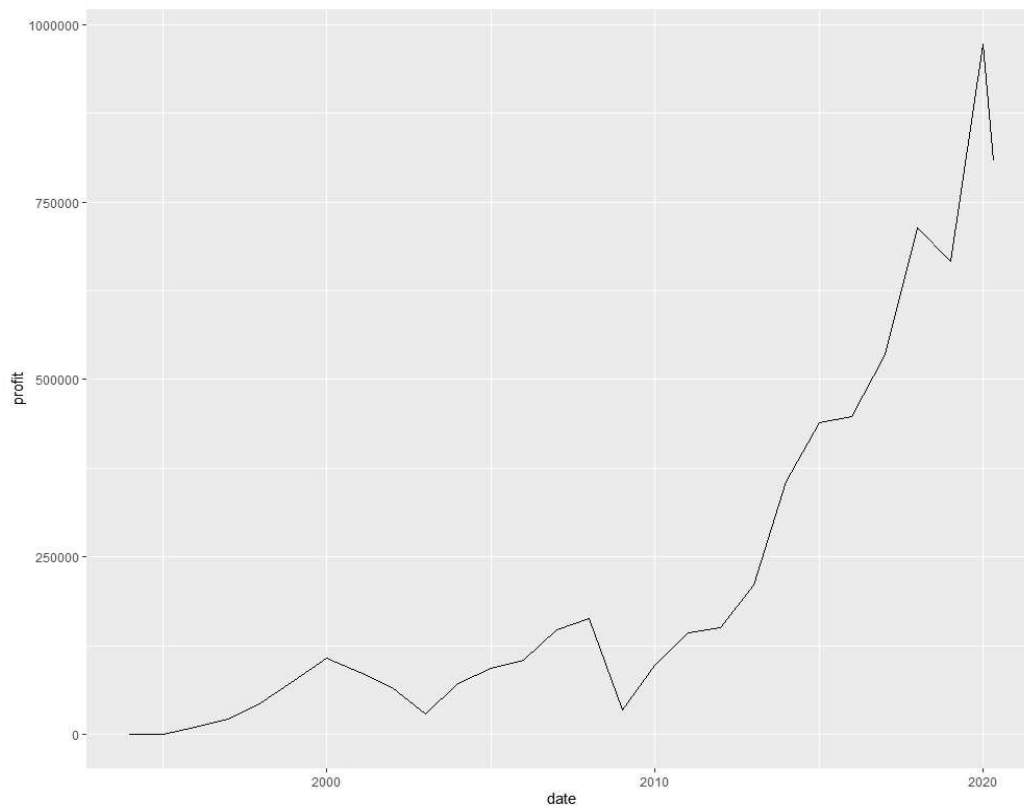
Plot using Strategy 2

Monthly:
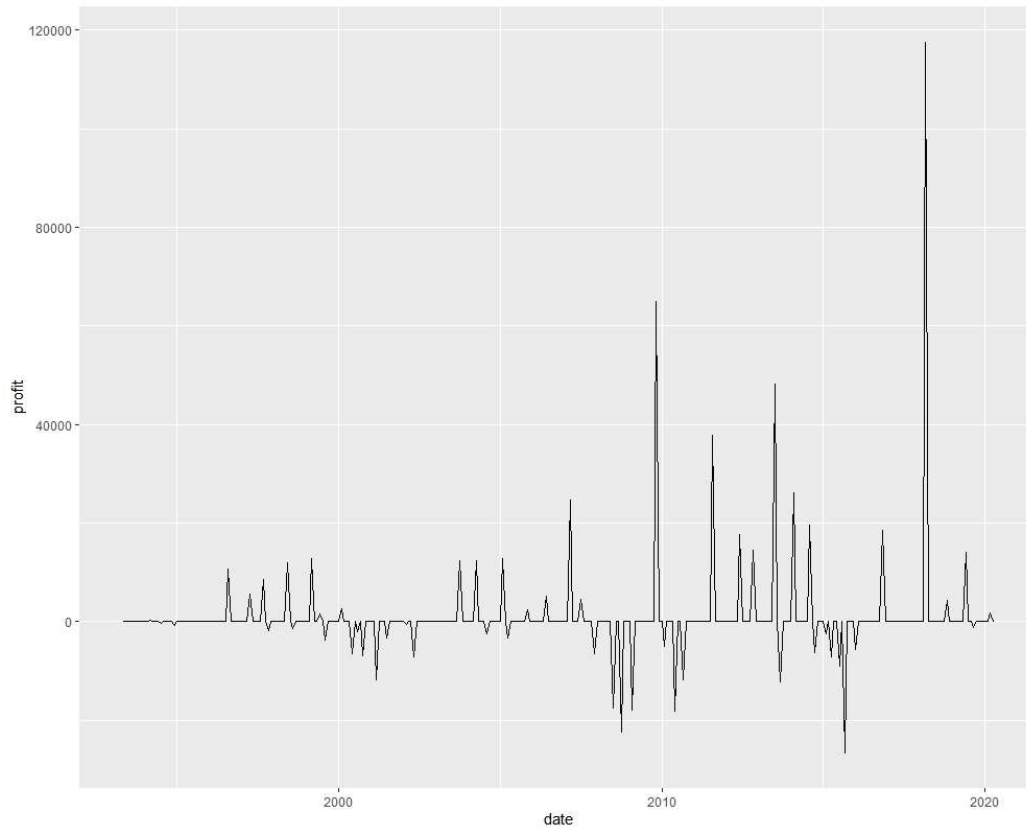
Plot using Strategy 2

Yearly:
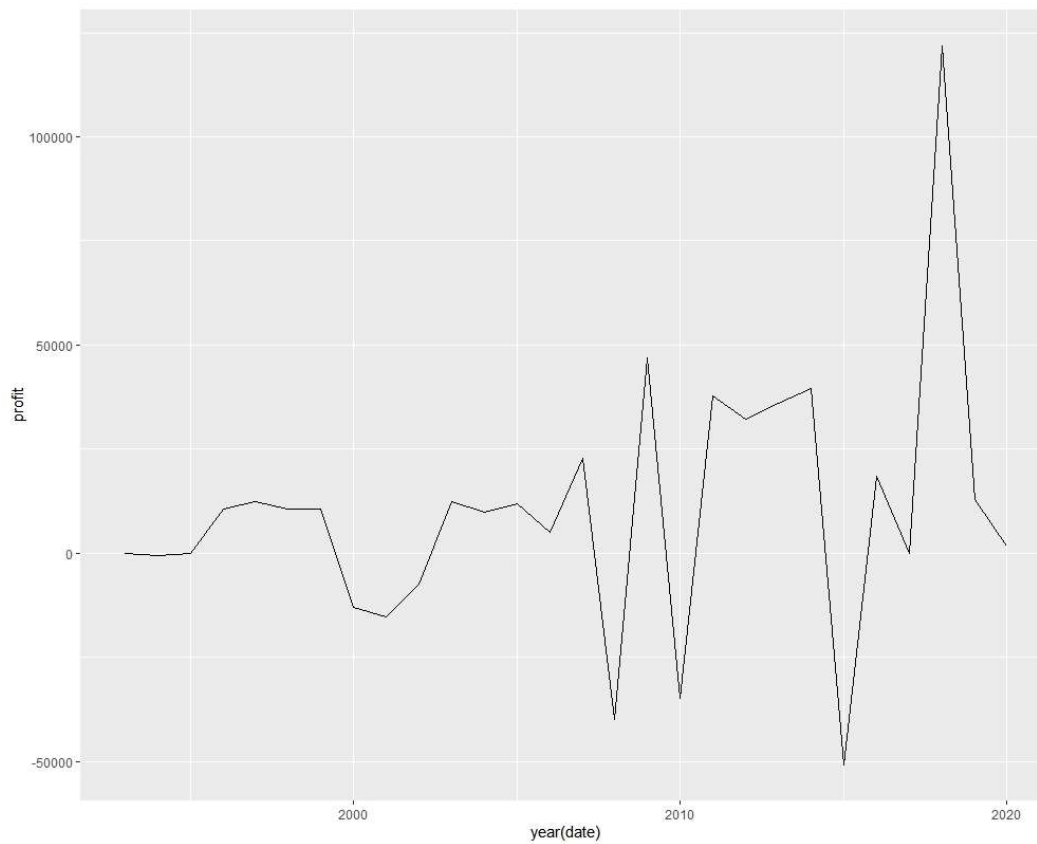
	Total Money Accumulated at the end
Strategy 1	1132410.0
Strategy 2	616745.1

The results initially surprised me because in strategy 1, we invest without caring about the consequences but not in strategy 2. But after looking into the matter, we come to the realization that the about of money at the end of each strategy is justified because in Strategy 1, the number of shares bought are **4057.362**. And in Strategy 2, the number of shares bought are **2083.825**. This plays a major role in the money accumulated in the end. In the end, we could say that **Strategy 2 is the best** as Strategy 1 only works if the growth of the invested stock is **guaranteed** in the future. But in Strategy 2, we **minimise the risks** of losing money even if the value of stocks go down. Therefore, **Strategy 2 is better than Strategy 1**.